Memorandum

U.S. Department
of Transportation
Federal Highway Administration

Subject: **INFORMATION:** Guidance on Developing Water Quality Action Plans

Date: MAY 28 1996

From: Chief, Environmental Analysis Division

Reply to Attn. of: HEP-40

To: Regional Administrators
Federal Lands Highway Program Administrator

The FHWA has identified the area of water quality as an optional element of its National Strategic Plan, Environment Goal. Under Objective #1 of the goal, the FHWA will develop initiatives in cooperation with resource agencies to protect and enhance the natural environment. One initiative that can be pursued to achieve Objective #1 is to develop and implement regional or statewide water quality action plans. Plans would likely be developed in cooperation with the EPA or a State environmental agency and would identify common goals of transportation development and protection of water resources.

The attached guidance is for your use in the event your office, or States within your Region, choose to initiate a coordinated effort to develop a water quality action plan. This guidance is recommended as a general outline of provisions that may be included as components of a water quality plan. They are not required specifications. We have coordinated the guidance with the headquarters office of the EPA.

Questions concerning this information should be directed to Pat Cazenas of my staff at (202) 366-4085 (E-mail at pcazenas.)

James M. Shrouds

Attachment

FHWA:HEP-40:PCazenas:nb:x64085:4/8/96
Rewritten:5/16/96 Revised:5/23/96:5/24/96
Disk:Pat's, File name:wqactpln.mem
cc: HDP-1, HEP-40, HEP-40(AQTT, AQPT, NT)
HEP-40(PCazenas), HEP-40(FBank),
HEP-40(NCRT2Files)

Development of Statewide or Regional Water Quality Action Plans

The principal Federal legislation concerning water quality is the Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977 (CWA). This act along with its amendments regulates discharges of pollutants from both point and nonpoint sources. The EPA and many States have issued regulations implementing the CWA goal of achieving and maintaining a high standard of water quality in surface and ground waters. Federal Agencies focus on water quality for different purposes, but all have a common goal of a clean water environment. The FHWA addresses this goal, with policies, technical and research assistance that incorporate water quality and transportation issues together into a coordinated management approach.

The FHWA has identified the area of water quality as one of the elements under Objective #1, Environment Goal of our National Strategic Work Plan. The objective is to develop initiatives in cooperation with resource agencies to protect and enhance the natural environment. The water quality activity, stated as an option for achieving our objective by September 30, 1996, is to develop and implement regional or statewide water quality action plans. These plans would most likely be a coordinated effort with the EPA, State environmental agencies, State departments of transportation and the FHWA to develop a plan of action for achieving common goals of transportation development and protection of water resources.

The purpose of this guidance is to provide a set of recommendations for the regions to consider when developing action plans and working with State and resource agencies on water quality issues. The guidance is written assuming any plan developed would continue current policies and procedures for the existing working relationship between the FHWA and the EPA or a State environmental agency or resource agency in areas that support common objectives, interests, and statutory requirements, but would initiate new areas of activities as they relate specifically to water quality. If needed, additional agreements also could be required to cover other specifics such as use of facilities, personnel, reimbursement, cooperative projects, and the transfer of funds.

We recommend the following general actions be included as components of any water quality action plan developed between the FHWA and other cooperating agencies such as the EPA, State environmental agencies, and other resource agencies:

1. Initiate Procedures to Identify Broadly-Based Water Quality Issues

Traditionally, environmental impacts associated with transportation development have been dealt with on a case-by-case, project-situated basis. However, a more effective way to achieve the best overall resource benefit may be to apply a broader approach to determining impacts and resource protection. A watershed or areawide planning approach can balance numerously and often interacting, environmental objectives while also providing the information necessary to evaluate localized project impacts. Many State and local agencies have moved toward more geographically oriented approach to land use planning and natural resource management. A

water quality action plan provision could be to pull together the resources and expertise of all interested stakeholders, and local, State, and Federal agencies and develop an approach to address highway-related water quality issues on a watershed basis.

An action plan may assure that highway development projects are coordinated with areawide water quality and environmental goals. Also, the information contained in highway development plans may become important for future water quality and resource protection planning activities. Such interaction may require an inventory of existing resources in the watershed as a basis for decisions. Any areas of identified water quality problems should be defined, along with recommendations on protecting these resources.

2. Promote and Support Coordination of Monitoring Measures

The CWA gives States the responsibility to monitor and assess their waters and report the results to the EPA. Monitoring is also done to fulfill specific regulatory requirements, such as those of the National Pollutant Discharge Elimination System (NPDES) permitting process. An action plan provision could be written to describe coordination of NPDES and other required monitoring activities to help assure that expenditures for data collection are held to a minimum. Also, this should improve the delivery of programs that utilize monitoring information. Results could allow permits to be issued once on a watershed basis for specific project types and then programmatically applied on subsequent actions. Monitoring could also be applied on a watershed basis to aid agencies in establishing integrated mitigation measures that are based on the overall water quality improvement needs of the basin. Finally, a plan could promote and support efforts to develop new and more efficient methods of water quality monitoring in each basin.

3. Information Exchange and Technical Assistance

The FHWA and the EPA should be proactive leaders working in partnership with the States, local governments, and resource agencies to develop joint training sessions, research, workshops, clearinghouses, and other items. A water quality action plan could highlight these activities and include commitments to work together in sharing information and technical expertise in the area of water quality.

Joint efforts to accomplish our short and long term goals for achieving and protecting water quality in areas of highway development may include:

- providing training sessions on erosion and sediment control, nonpoint source pollution, stormwater management, and watershed resource planning and management;

- developing best management practices guidance describing issues of where and when to use specific facilities, when treatment measures are required, and what treatment measures are most effective;

- developing education and outreach information on highway operation and maintenance activities and the potential impacts to water quality (examples include storage of deicing salt, use of pesticides and construction site chemicals);

- helping States to establish watershed management areas;

- developing guidance on making full use of ISTEA environmental enhancement activities and funds for mitigating water pollution due to highway runoff;

- developing guidance on achieving water quality improvement by managing stormwater management facilities;

- establishing a phone line for information or inquiries on water quality issues;

- establishing a web site on the Internet;

- providing sample planning and zoning guidelines relating land use to water quality. An example would be the establishment of buffers or areas to protect riparian habitat along drainage ways and stream corridors;

- developing guidance on stormwater management (water quality) and how wetlands can serve a dual function as habitat mitigation and water quality management practice; or

- providing technical transfer and information on performing resource inventories, water quality monitoring, mapping, and data storage/presentation.

4. **Responsibilities**

The FHWA, the EPA, States, and State agencies share a common interest in encouraging responsible and efficient management of the resources involved in our Nation's transportation system, and a need to protect and enhance these resources. The FHWA's interest included addressing the connection between land use development and transportation, and ways in which to minimize the impacts of highway runoff within a watershed. We need not only understand the technical aspects of highway design and maintenance, but also the impacts it has on the environment.

Roadways tend to bisect watersheds. Water quality impacts attributed to erosion, sedimentation, and polluted runoff associated with highway construction, operation, and maintenance may be limited to the adjacent streams. In the watershed downstream, the impact from the road may be offset or diluted by the contributions of the various other land uses. But overall the watershed is impacted by the combined contributions of various land use activities. This indicates the need to take an approach to the water quality issues on a regional or watershed approach. This overall approach should incorporate various players and activities that can protect this valuable resource.

The EPA's role includes the prevention, reduction, and abatement of pollution in the air, water, and soil by setting and enforcing standards for pollutants including pesticides, toxic substances, radiation, noise, and solid waste. These programs are carried out through a delegation of power to the State and local entities through technical assistance and cooperation.

The FHWA's responsibilities involve providing financial and technical assistance to the States and local governments for the design and construction of highways. This responsibility includes oversight on federally-assisted projects to ensure compliance with environmental statues and other program requirements. The Agency is also responsible for conducting a program of research and development in transportation technology. These responsibilities, carried out under an action plan, should strengthen coordination, cooperation, and communication between Federal Agencies, the States, and local communities, and should establish a working partnership to include objectives and procedures to protect, enhance, and preserve water quality.

5. **Compliance and Enforcement**

The water quality action plan should establish management goals and practices that can be achieved by State and local governments to help protect and maintain their water quality standards. The action plan should incorporate and establish time frames for activity programs in each region and include procedures for reevaluation and revision. To ensure compliance, the action plan should be supported with enforceable policies and mechanisms (such as Memorandum of Understanding, official agency orders, local regulations, etc.). Voluntary compliance can be achieved through encouragement provided by citizen groups. These mechanisms are paramount to ensuring a total commitment to the action plan and its implementation.

Management measured to be addressed in the water quality action plan could include the following:

- protect areas that provide water quality benefits (e.g., wetlands, aquatic ecosystems, riparian areas, wellhead sites, etc.), and protect areas that are susceptible to erosion (e.g., unstable soils, karst materials, landslide areas, fragile stream banks, etc.);

- develop erosion and sediment control strategies at the planning and design stage to be implemented during construction, operation, and maintenance;

- ensure the proper use, storage, and disposal of toxic substances at construction sites and maintenance facilities; develop oil spill contingency plans and clean up procedures;

- identify watershed pollution reduction opportunities to reduce pollutant concentrations and volumes entering surface waters;

- promote the use of vegetative methods to control erosion and other feasible methods to reduce pollutant loadings and total suspended solids from reaching surface waters; and/or

- perform water quality monitoring to assess pollution load reduction and changes in water quality.

6. **Implementation of Plan**

The FHWA, the EPA, State departments of transportation, and State environmental agencies should promote adoption and implementation of the water quality action plan through their regional and State departments. The action plan's framework should integrate water quality issues and other environmental considerations into the planning, design, operation, and maintenance of transportation programs and projects on a watershed management scale. The action plan should also include provisions to reevaluate and amend water quality management measures and the time frames established to implement these measures.

The FHWA divisions and regional offices are encouraged to be proactive leaders in developing working partnerships with States, MPOs, and local governments to ensure implementation of any action plans that are developed.

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

23 CFR Part 650

[FHWA Docket No. 93-6]

RIN 2125-AD08

Erosion and Sediment Control on Highway Construction Projects

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of proposed rulemaking; request for comments.

SUMMARY: Section 1057 of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 requires the Secretary to develop erosion control guidelines for States to follow when carrying out Federal-aid construction projects. Pursuant to this authority, the existing regulation, issued in 1974, would be updated and modified by the FHWA to reflect current state-of-the-art practices and management techniques. To fulfill the requirements of section 1057, the FHWA proposes to adopt, as guidelines, the American Association of State Highway and Transportation Officials (AASHTO) publication "Erosion and Sediment Control in Highway Construction," Volume III, 1992. The updated regulation would include a statement recommending that each State highway agency (SHA) apply these guidelines, or their own more stringent guidelines, to develop specific standards and practices for the control of erosion.

DATES: Comments must be received on or before June 28, 1993.

ADDRESSES: Submit written, signed comments to FHWA Docket No. 93-6, room 4232, HCC-10, Office of the Chief Counsel, Federal Highway Administration, 400 Seventh Street, SW., Washington, DC 20590. A copy of the AASHTO publication and all comments received will be available for examination at the above address from 8:30 a.m. to 3:30 p.m., e.t., Monday through Friday, except legal Federal holidays. Those desiring notification of receipt of comments must include a self-addressed, stamped postcard.

FOR FURTHER INFORMATION CONTACT: Mr. Robin L. Schroeder, Construction and Maintenance Division, Materials Branch, HNG-23, 202-366-1577; or Mr. Lee Burstyn, Office of the Chief Counsel, HCC-31, 202-366-1366; Federal Highway Administration, 400 Seventh Street, SW., Washington, DC 20590. Office hours are 7:45 a.m. to 4:15 p.m., e.t., Monday through Friday, except legal Federal holidays.

SUPPLEMENTARY INFORMATION:

Congressional Mandate

Section 1057 of the ISTEA (Pub. L. 102-240, 105 Stat. 1914, 2002) provides that the Secretary develop erosion control guidelines for States to follow when carrying out highway construction projects. Section 1057 specifically provides that these guidelines may not preempt any other State requirements for erosion control if State requirements are more stringent. In addition, the guidelines must be developed to conform with section 319 of the Federal Water Pollution Control Act (33 U.S.C. 1339) and coastal nonpoint source pollution control guidelines under section 6217(g) of the Omnibus Budget Reconciliation Act of 1990 (Pub. L. 101-508, 104 Stat. 1388-314). These guidelines are to be followed for any project funded, in whole or in part, under Title 23, United States Code, Highways.

Current Federal-Aid Guidance

Currently 23 CFR part 650, subpart B, Erosion and Sediment Control on Highway Construction Projects (23 U.S.C. 109 (a), (g) and (h)), contains material on this subject. This subpart, which was last updated in 1974, states that it is the policy of the FHWA to minimize erosion and sediment damage to highways and adjacent properties and to abate pollution of surface and ground water resources resulting from Federal-aid highway projects.

Existing Guidance

There is a wide variety of publications, pamphlets, and specifications available on the subject of erosion control. The AASHTO has addressed this issue in a number of documents including its "Model Drainage Manual," 1991, "Construction Manual," 1984, and its "Highway Drainage Guidelines," 1992. These documents are available for purchase from the American Association of State Highway and Transportation Officials, suite 225, 444 North Capital St., NW., Washington, DC 20001. They may be inspected at the FHWA headquarters and field offices as prescribed by 49 CFR part 7, appendix D.

Section 1057 of the ISTEA requires that the FHWA develop erosion control guidelines. After conducting a review of the available literature on the subject, it was determined that a practical, efficient, and cost effective approach would be to adopt existing, state-of-the-art guidelines, if such guidelines would satisfy the requirements of this section.

The FHWA then determined that the AASHTO publication "Erosion and Sediment Control in Highway Construction," Volume III, 1992, would adequately fulfill the requirements of section 1057. This publication is part of the AASHTO's "Highway Drainage Guidelines," and was recently revised and approved by the AASHTO. The original Volume III was last revised in 1973, and is cited in 23 CFR 625.5(b)(6). The updated version contains a comprehensive view of the development, implementation, and maintenance of erosion and sediment control plans and appurtenances. It also identifies temporary and permanent erosion and sediment control practices and details specific design parameters. Examples of the design and use of some typical erosion control devices are also included.

As mentioned earlier, section 1057 requires that any guidelines that are developed must conform with section 319 of the Federal Water Pollution Control Act (33 U.S.C. 1339) and the coastal nonpoint source pollution control guidelines under section 6217(g) of the Omnibus Budget Reconciliation Act of 1990. The updated AASHTO guidelines include design and implementation details that will contribute to the development and implementation of best management practices (BMPs) in highway construction. These BMPs will aid in the control of nonpoint source pollution, which is the intent of the above two laws.

Additional Guidance

Since highway construction traverses a wide range of locations, each having its own particular problems and corresponding solutions in the area of erosion and sediment control, the FHWA is recommending that each SHA develop detailed guidelines to address its own erosion and sediment control problems. This will allow each SHA to put greater emphasis on problems and solutions that have been historically identified within individual States. This will also allow SHAs the latitude to develop and apply guidelines which are more stringent than the AASHTO guide.

Request for Comments

The FHWA requests comments and suggestions concerning the proposed changes to 23 CFR part 650, subpart B. Comments on the applicability of the 1992 AASHTO guidelines to be used on Federal-aid construction projects and the recommendation that SHAs develop their own specific guidelines are of particular interest. Comments to the docket should be submitted by the deadline indicated above.

Rulemaking Analyses and Notices

Executive Order 12291 (Federal Regulations) and DOT Regulatory Policies and Procedures

The FHWA has determined that this action is not major within the meaning of Executive Order 12291 or significant within the meaning of Department of Transportation regulatory policies and procedures. The FHWA, at 23 CFR part 650, Subpart B, as well as other Federal agencies, currently have regulations regarding erosion and sediment control. Adopting the AASHTO guidelines would merely update and reinforce existing policy. Therefore, it is anticipated that the economic impact of this rulemaking would be minimal and a full regulatory evaluation is not required.

Regulatory Flexibility Act

In compliance with the Regulatory Flexibility Act (Pub. L. 96-354, 5 U.S.C. 601-612) the FHWA has evaluated the effects of this proposal on small entities. The FHWA concluded that it and other Federal agencies currently have regulations dealing with erosion and sediment control, and adopting the 1992 AASHTO guidelines would merely reinforce existing policy. Therefore, the FHWA hereby certifies that this rulemaking would not have a significant economic impact on a substantial number of small entities.

Executive Order 12612 (Federalism Assessment)

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that this action would not have sufficient federalism implications to warrant the preparation of a federalism assessment.

Executive Order 12372 (Intergovernmental Review)

Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.

Paperwork Reduction Act

This action does not contain a collection of information requirement for purposes of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*

National Environmental Policy Act

This rulemaking would provide guidance to SHAs when implementing or developing erosion and sediment control guidelines. This would aid in the control and prevention of nonpoint source pollutants. It would not constitute a major action having a significant effect on the environment, and therefore does not require the preparation of an environmental impact statement pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*)

Regulation Identification Number

A regulation identification number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross reference this action with the Unified Agenda.

List of Subjects in 23 CFR Part 650

Grant programs-transportation, Highways and roads, Soil conservation.

In consideration of the foregoing, the FHWA proposes to amend title 23, Code of Federal Regulations, part 650, subpart B as set forth below.

Issued on: February 22, 1993.

E. Dean Carlson,

Executive Director.

PART 650—BRIDGES, STRUCTURES, AND HYDRAULICS

1. The authority for part 650 is revised to read as follows:

Authority: 23 U.S.C. 109 (a) and (h), 144, 151, 315, and 319; 23 CFR 1.32; 49 CFR 1.48(b), E.O. 11988—Floodplain Management, May 24, 1977 (42 FR 26951); Department of Transportation Order 5650.2 dated April 23, 1979 (44 FR 24678); § 161 of Pub. L. 97-424, 96 Stat. 2097, 2135; § 4(b) of Pub. L. 97-134, 96 Stat. 1699; 33 U.S.C. 401, 491 *et seq.*, 511 *et seq.*; and § 1057 of Pub. L. 102-240, 105 Stat. 2002.

Subpart B—Erosion and Sediment Control on Highway Construction Projects

2. Part 650 is amended by revising §§ 650.201, 650.203, 650.205 and 650.209 and by adding § 650.211 to read as follows:

§ 650.201 Purpose.

The purpose of this subpart is to prescribe policies and procedures for the control of erosion, abatement of water pollution, and prevention of damage by sediment deposition from all projects funded under title 23, United States Code.

§ 650.203 - Policy.

It is the policy of the Federal Highway Administration (FHWA) that all highways funded in whole or in part under title 23, United States Code, shall be located, designed, constructed and operated according to standards that will minimize erosion and sediment damage to the highway and adjacent properties and abate pollution of surface and ground water resources. Guidance for the development of standards used to minimize erosion and sediment damage is referenced in § 650.211 of this part.

§ 650.205 Definitions.

Erosion control measures and practices are actions that are taken to inhibit the dislodging and transporting of soil particles by water or wind, including actions that limit the area of exposed soil and minimize the time the soil is exposed.

Permanent erosion and sediment control measures and practices are installations and design features of a construction project which remain in place and in service after completion of the project.

Pollutants are substances, including sediment, which cause deterioration of water quality when added to surface or ground waters in sufficient quantity.

Sediment control measures and practices are actions taken to control the deposition of sediments resulting from surface runoff.

Temporary erosion and sediment control measures and practices are actions taken on an interim basis during construction to minimize the disturbance, transportation, and unwanted deposition of sediment.

* * * * *

§ 650.209 Construction.

(a) Permanent erosion and sediment control measures and practices shall be established and implemented at the earliest practicable time consistent with good construction and management practices.

(b) Implementation of temporary erosion and sediment control measures and practices shall be coordinated with permanent measures to assure economical, effective, and continuous control throughout construction.

(c) Erosion and sediment control measures and practices shall be monitored and revision made when needed to insure that they are fulfilling their intended function during the construction of the project.

(d) Federal-aid funds shall not participate in erosion and sediment control actions made necessary because of contractor oversight, carelessness, or

failure to implement sufficient control measures.

(e) Pollutants used during highway construction or operation and material from sediment traps shall not be stockpiled or disposed of in a manner which makes them susceptible to being washed into any watercourse by runoff or high water. No pollutants shall be deposited or disposed of in watercourses.

§ 650.211 Guidelines.

(a) The FHWA adopts the AASHTO Highway Drainage Guidelines, Volume III, "Erosion and Sediment Control in Highway Construction," 1992,[3] as guidelines to be followed on all construction projects funded under title 23, United States Code. These guidelines are not intended to preempt any requirements made by or under State law if such requirements are more stringent.

(b) Each SHA should apply the guidelines referenced in paragraph (a) of this section or apply its own guidelines, if these guidelines are more stringent, to develop standards and practices for the control of erosion and sediment on Federal-aid construction projects. These specific standards and practices may reference available resources, such as the procedures presented in the AASHTO "Model Drainage Manual," 1991.[4]

[FR Doc. 93-4526 Filed 2-26-93; 8:45 am]
BILLING CODE 4910-22-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 86

[AMS-FRL-4591-4]

Control of Air Pollution From New and In-Use Motor Vehicles and New and In-Use Motor Vehicle Engines; Technical Amendments to the Test Procedures for Methanol-Fueled Motor Vehicles and Motor Vehicle Engines and Petroleum-Fueled Motor Vehicles; Proposed Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of proposed rulemaking.

SUMMARY: This proposal includes revisions to test procedures previously promulgated for methanol-fueled vehicles. These revisions make minor corrections to the procedures, provide additional options, and clarify the Agency's regulatory intent. This proposal is the result of a cooperative interaction between Agency staff and the affected automobile and engine manufacturers. Overall, the changes are expected to allow manufacturers more flexibility in complying with the applicable regulations, without sacrificing accuracy of test results. Among the most significant changes are revisions to the testing requirements for flexible fuel vehicles (FFVs), the allowance of electronic mass flow controllers for methanol and formaldehyde sample systems, the allowance of lower temperatures for some heated components, establishment of wider tolerances for SHED and CVS verifications, and specification of the fuel to be used with all flame ionization detectors. It should be noted that the revision related to flame ionization detectors affects all light-duty vehicles, including gasoline-fueled vehicles.

DATES: Written comments on this action will be accepted until April 30, 1993. Further information on the submission of comments can be found under "Public Participation". If requested, the Agency will hold a public hearing on March 31, 1993.

ADDRESSES: Comments should be sent to: EPA Air Docket LE-131, Attention Docket No. A-92-02, located at the Air Docket Section, U.S. Environmental Protection Agency, room M-1500, 401 M Street SW., Washington, DC, 20460. The public hearing, if held, will be at the National Vehicle and Fuels Emission Laboratory, 2565 Plymouth Road, Ann Arbor, MI 48105. Material relevant to this rulemaking is contained in the EPA Air Docket, and may be inspected between 8 am and 3 pm. Monday through Friday. Information may also be obtained from the U.S. Environmental Protection Agency, Office of Mobile Sources, Regulation Development and Support Division, Engine and Vehicle Regulation Branch, 2565 Plymouth Road, Ann Arbor, MI, 48105.

FOR FURTHER INFORMATION CONTACT: Charles Moulis, Regulation Development and Support Division, U.S. Environmental Protection Agency, 2565 Plymouth Road, Ann Arbor, MI 48105. Telephone: (313) 741-7826.

SUPPLEMENTARY INFORMATION: This proposal covers many areas related to the testing of methanol-fueled vehicle. The most significant aspects of the proposal are described below. The reader is advised, however, to read the draft regulatory language, which is available docket number A-92-02, for complete details.

A. Proposed Revisions

1. Test Fuels

Manufacturers of methanol-fueled flexible fuel vehicles (FFVs) are required to comply with the methanol-fueled vehicle standards when using any fuel mixture within the vehicle's design range. (FFVs are vehicles that are designed to operate using a methanol fuel, gasoline and all mixtures of the two).

In order to ensure that such vehicles meet the standards over the full range of fuel mixtures, the existing regulations (40 CFR 86.113) require that manufacturers submit test data for worst case fuel mixtures. However, since the time of final promulgation of this requirement, it has become apparent that implementation of such an approach can be problematic. Identification of the worst case exhaust fuel mixture is difficult since there is more than one exhaust pollutant. The mixture that would produce the highest organic emissions would probably be different from the mixture that would produce the highest NO_x or CO emissions. The worst case evaporative fuel would probably also be different. Therefore, while the Agency will still require that FFVs comply with the standards when operating on any fuel mixture within the design range, the means by which this compliance is demonstrated is being changed. Rather than attempting to identify a single worst case fuel, it is proposed that manufacturers demonstrate compliance by submitting test data for three fuel mixtures during certification. These three mixtures are: The methanol fuel expected to be found in use, gasoline, and the highest volatility mixture. The use of straight methanol fuel (e.g., M85) and straight gasoline would demonstrate compliance at the two extremes of operation. The high volatility mixture would ensure proper evaporative emissions controls. This mixture will be approximately M10 (the mixture will contain between nine and thirteen percent methanol). While the Agency is proposing to accept testing on the above fuels as an adequate demonstration for certification, it should be emphasized that the Agency will retain the right to perform its confirmatory testing using any mixtures within the design range

[3] This document is available for inspection from the FHWA headquarters and field offices as prescribed by 49 CFR part 7, appendix D. It may be purchased from the American Association of State Highway and Transportation Officials offices at suite 225, 444 North Capitol Street, NW., Washington, DC 20001.

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